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ABSTRACT

The report "Functional Requirements for Bibliographic Records" from the International Federation of Library Associations and Institutions (IFLA) has been chosen as the theoretical foundation for teaching cataloging in Denmark. This paper illustrates the way the ideas in the report have been implemented in the teaching of cataloging at the Royal School of Library and Information Science (Denmark). Experiences with this theoretical foundation have been satisfactory, and teachers intend to go on developing the curriculum on this basis. (Author/MES)


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### About the use of "Functional Requirements for Bibliographic Records" in teaching cataloguing

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#### Abstract

*The report "Functional Requirements for Bibliographic Records" from the IFLA Study Group on Functional Requirements for Bibliographic Records has been chosen as the theoretical foundation for teaching cataloguing in Denmark. This paper illustrates the way we have implemented the ideas in the report in the teaching of cataloguing at The Royal School of Library and Information Science. Our experiences with this theoretical foundation are satisfactory, and we intend to go on developing our curriculum on this basis.*

#### Paper

#### BACKGROUND

In Denmark we have a long tradition for focusing on the **why** of cataloguing rather than the **how** to catalogue when teaching this discipline. Cataloguing rules and cataloguing policy may vary from library to library and from one product to another. So we have chosen to give priority to the teaching of the fundamentals of cataloguing, to make the students understand the basic reasons behind the production of document representations.

In Denmark, we have standards for cataloguing and forming common to the national bibliography, the public libraries, and many of the research libraries. These standards are modifications of AACR2 and MARC. Danish library students are familiarized with these

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standards and are to some extent trained in producing bibliographic records according to these standards - primarily by self-tuition. If the students later on have to catalogue in a library or elsewhere, they will need further training on the job to learn the cataloguing standards in detail.

We use the concept **bibliographic control** as a starting point for teaching cataloguing. Nowadays bibliographic control is usually achieved through the production of bibliographic records and similar machine-readable document representations.

Before the appearance of "Functional Requirements for Bibliographic Records" we used:

- Cutters Objects of the Catalogue
- Functions of the catalogue as defined in the Paris Principles as the frame of reference for requirements for data in bibliographic records.

The advantage of using Cutters Objects was that they express requirements of:

- the description of the documents
- the collocating and relating function of the catalogue, which can be achieved by normative headings
- the subject data

The disadvantage of using Cutters formulation in the 1990s is:

- Cutters terminology seems outdated
- Cutter does not explicitly recognize the discrepancy between the work and the manifestation

The Paris Principles explicitly recognize the discrepancy between the work and the manifestation. On the other hand, they have the disadvantage of just dealing with headings for author and title data.

We first integrated "Functional Requirements for Bibliographic Records" in our basic educational material in 1997 using the actual draft version. When the final report appeared, we adjusted the material according to this version. Before 1997 the draft versions of "Functional Requirements for Bibliographic Records" were used only for special courses.

Among other things, the following makes "Functional Requirements for Bibliographic Records" an outstanding starting point for teaching cataloguing:

- the focus is on the bibliographic record - Cutter and the Paris Principles are talking about the catalogue, and the defining criteria of both a catalogue and a collection are shaky seen in the light of the present information technology, which facilitates remote access and the possibility of exchange of records
- "Basic Level of Functionality" in "Functional Requirements for Bibliographic Records" deals with all types of data in the bibliographic record:
  - descriptive data
  - headings for author and title data
  - subject data
  - localization data
- "Functional Requirements for Bibliographic Records" is user-oriented as it deals with the generic user tasks performed on the data in the records:
  - to **find**

- to **identify**
  - to **select**
  - to acquire or **obtain**
- the distinction between the work, the expression, the manifestation and the item is explicit throughout
  - the methodology and the terminology are up to date. The students will meet the same concepts and terminology in cataloguing as in the courses on system analysis

## **THE USE OF "FUNCTIONAL REQUIREMENTS FOR BIBLIOGRAPHIC RECORDS" IN THE LIS FOUNDATION PROGRAMME (BACHELOR PROGRAMME)**

I am now going to illustrate how the basic teaching on cataloguing in The Royal School of Library and Information Science in Denmark is built around "Functional Requirements for Bibliographic Records". The component parts of the report are brought into play in a course including the following sub-topics in that order:

- bibliographic control
- bibliographic records
- user tasks
- "Basic Level of Functionality"
- entities in the conceptual model
- relationships in the conceptual model
- types of authorship
- authority control
- levels of description

When a student first comes to a cataloguing class (s)he has some experience of searching bibliographic and other databases as well as searching the Internet. We start by emphasizing that cataloguing is a process in **the bibliographic universe**. We study the bibliographic data in many instances of different types of materials which could be objects for cataloguing and the immediate entities for **bibliographic control**. We define these objects as being under bibliographic control when they are described in bibliographic records or similar document representations to be integrated in bibliographic databases or other bibliographic tools. We define cataloguing as the process of producing the bibliographic records for storage in databases and subsequent retrieval.

As we studied the bibliographic data in instances of types of materials, we spent some time studying instances of bibliographic records and other document representations produced using various cataloguing rules and formats. This way the students get a feeling of the variation in:

- the types of materials we are trying to bring under bibliographic control
- the cataloguing rules, formats and levels of description
- the types of data in bibliographic records

When this feeling about the materials and the data in the records is established, we proceed by looking into the uses being made of the data in bibliographic records. For this purpose the **User Tasks** as defined in "Functional Requirements for Bibliographic Records" are introduced:

- to **find**
- to **identify**
- to **select**

- to acquire or **obtain**

We discuss the situations in the information retrieval process in which the tasks and datatypes are relevant:

- when searching
- when displaying
- when identifying
- when evaluating search results
- when filtering out non-relevant entities
- when reformulating search criteria

Again we study instances of bibliographic records for a more detailed discussion of their ability to support the user tasks, and the quality of the data in relation to the user tasks.

This detailed discussion of the user tasks in relation to the data in bibliographic records leads us to the introduction of "**Basic Level of Functionality**" as the component part of "Functional Requirements for Bibliographic Records" explicitly stating the requirements necessary for supporting the user tasks:

- **Find** all *manifestations* embodying:
  - the *works* for which a given *person* or *corporate body* is responsible
  - the various *expressions* of a given *work*
  - *works* on a given subject
  - *works* in a given series
- **Find** a particular *manifestation*:
  - when the name(s) of the *person(s)* and/or *corporate body(ies)* responsible for the *work(s)* embodied in the *manifestation* is (are) known
  - when the title of the *manifestation* is known
  - when the *manifestation* identifier is known
- **Identify** a *work*
- **Identify** an *expression* of a *work*
- **Identify** a *manifestation*
- **Select** a *work*
- **Select** an *expression*
- **Select** a *manifestation*
- **Obtain** a *manifestation*

The formulation of "Basic Level of Functionality" mentions most of the entities in the conceptual E / R model in "Functional Requirements for Bibliographic Records". The discussion of the subject entities is taken care of in the teaching on classification and subject indexing. We proceed with a detailed presentation of the entities and relations in the E / R model.

The students do not find it difficult to comprehend the entities in:

- Group 2 Entities: Person, Corporate Body
- Group 3 Entities: Concept, Object, Event, Place

On the other hand, many students find it difficult to comprehend the entities in:

- Group 1 Entities: Work, Expression, Manifestation, Item
  - work: a distinct intellectual or artistic creation
  - expression: the intellectual or artistic realization of a *work*
  - manifestation: the physical embodiment of an *expression* of a *work*
  - item: a single exemplar of a *manifestation*

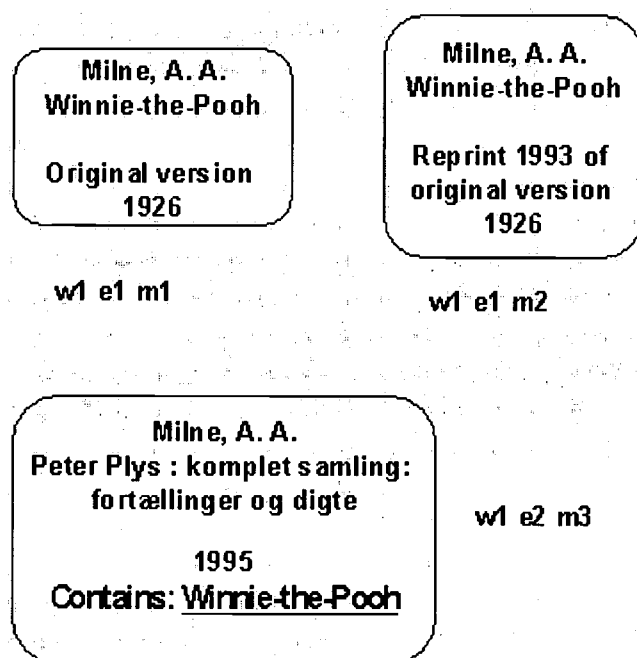
Some students find it unnecessarily complicated to operate with the abstract entities of the model as you cannot study these entities per se. They find the definition of the entities to be academic and airy.

We try to overcome these difficulties in a pragmatic way. We explain that one of the results we want to achieve in the production of a bibliographic record is to tell what is alike and what is different in the content of two or more items. Put in another way: what is the relationship between the items we are cataloguing. To realize and describe the relations between items we need the abstract entities as a frame of reference.

We study manifestations containing:

- the same expression of a work
- different expressions of a work

to make the matter more concrete. An example might be:



Having studied the entities as found in the objects for cataloguing, we study the corresponding bibliographic records to see how the entities and relationships are described in the records.

During this process, we inevitably reach a point where the crucial questions are raised:

- what are the boundaries of a work?
- how can you tell when a work has changed so much that we are facing a new work?

As teachers we cannot answer these questions unambiguously. Who can? We try to deal with them in a pragmatic way. For cataloguing purposes we can agree with the essence of what Pat Oddy once wrote:

*"The cataloguing world can live without a definition of a work - we all have a pretty good gut feeling as to when a work is a new work and when it is a manifestation of an existing one ... That feeling is based, to a large extent, on whether or not our professional experience judges that a user would benefit from the bringing together in a catalogue search of the manifestations of a particular organized set of words, sounds or images"*

Besides using the "Basic Level of Functionality" to introduce the conceptual E / R model, we use it as a framework for discussing the implications of the requirements:

- **Find all manifestations embodying ...**
  - leads to a discussion of the collocating and relating function
  - which methods are available for operationalizing this requirement
  - leads to a discussion of types of authorship and authority control
- **Find a particular manifestation ...**
  - leads to a discussion of descriptive data and
  - reasons for making manifestations searchable by their inherent data
- **Identify a work / expression of a work / manifestation**
  - leads to a discussion of unambiguous data
  - individualizing data
  - levels of description
- **Select a work / expression of a work / manifestation**
  - leads to a discussion of the user's chances for qualified selection among retrieved records
  - individualizing data
  - levels of description
- **Obtain a manifestation**
  - leads to a discussion of publishing related data
  - localizing data
  - system requirements data for electronic manifestations

## **THE USE OF "FUNCTIONAL REQUIREMENTS FOR BIBLIOGRAPHIC RECORDS" IN THE MASTER PROGRAMME.**

In our master programme "Functional Requirements for Bibliographic Records" is part of the curriculum in two courses which are not primarily cataloguing courses:

- system analysis and design
- system evaluation

In the course dealing with system analysis and design the students are taught methods, models and tools for system analysis in general. In connection with this general course we have some cataloguing classes where the students read "Functional Requirements for Bibliographic Records" from cover to cover. The purpose of reading the entire report is:

- to show a concrete example of E / R analysis technique on bibliographic data
- to strengthen the knowledge of bibliographic data and its function

After the introduction of "Functional Requirements for Bibliographic Records" we find that it is often used in part or as a whole by students for major or minor papers. Typical examples of papers are:

- To which extent is the standard xx in conformity with the requirements in "Basic Level of Functionality"?
- Define a cataloguing policy for Library XX using the "Mapping Attributes and Relationships to User Tasks" (Tables 6.1-6.4)

In the course dealing with system evaluation the students are taught methods, criteria and



approaches to evaluation as well as system-oriented and user-oriented evaluation. In connection with this general course, we have introduced "Basic Level of Functionality" as special evaluation criteria for bibliographic data. "Basic Level of Functionality" can be applied as evaluation criteria at several levels:

- the system level
  - is the system functionality in accordance with the "Basic Level of Functionality"?
- the level of cataloguing rules and formats
  - are the cataloguing rules and the format able to operationalize the requirements of "Basic Level of Functionality"?
- the record level
  - are the data in a bibliographic record produced according to a certain cataloguing policy on a certain description level in accordance with "Basic Level of Functionality"?

## IDEALS, RULES AND CATALOGUING POLICY

The Danish version of AACR2 has not defined levels of cataloguing like the original. It is stated in the introduction that each bibliographic agency has to define its own cataloguing policy and level of cataloguing considering the product and the users of the product. The rules also have a chapter on criteria for defining cataloguing levels.

As it is the intention of the rules that they should be administered individually by the cataloguing agencies, we treat the subjects:

- cataloguing policy
- cataloguing economics

when teaching cataloguing.

With regard to these subjects, the chapters on:

- "Basic Level of Functionality"
- "Mapping Attributes and Relationships to User Tasks"

are particularly useful.

"Basic Level of Functionality" outlines the overall functional requirements, while the tables mapping attributes and relationships to user tasks are a valuable tool for clarifying the gain / loss of functionality by including / excluding an attribute or relationship. Even though you might disagree with the value assigned to an attribute or relation, the tables can increase your awareness of the functionality of each attribute and relation and be a help in your own judgement as to its value.

We do not teach either "Functional Requirements for Bibliographic Records" or any set of cataloguing rules in a legalistic manner. We regard both as ideals which ought to be adhered to whenever possible, that is:

- when it makes sense for a given product with a given purpose
- when the necessary resources are available

What we are trying to achieve is to make our students aware of the impact on functionality of the choices you make, when an ideal solution is not possible.

## CONCLUSION



As I have hopefully demonstrated, we have made "Functional Requirements for Bibliographic Records" our theoretical starting point for teaching cataloguing. It is our frame of reference when discussing cataloguing phenomena. We use these requirements as the ideal or standard against which we measure possible solutions to cataloguing problems. We are satisfied with our experiences using "Functional Requirements for Bibliographic Records" and intend to go on as we have started.

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